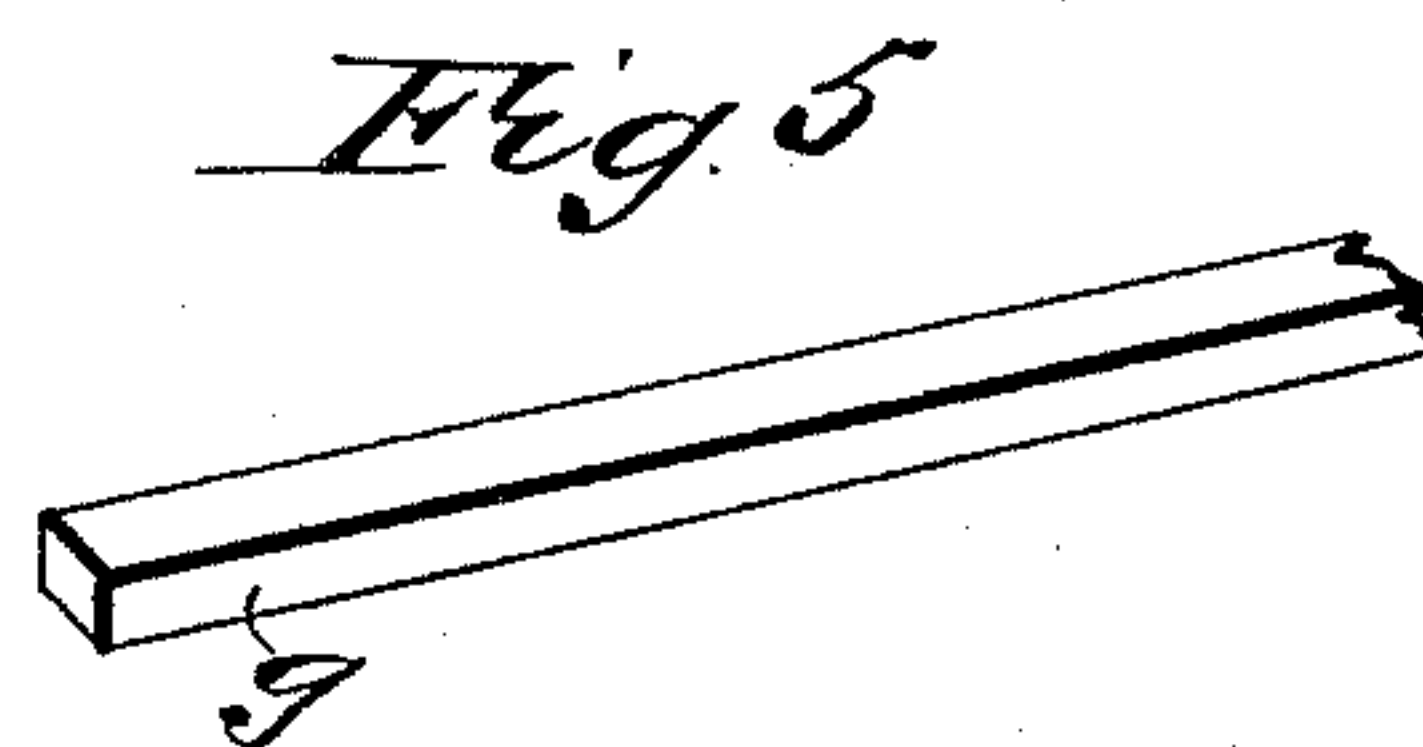
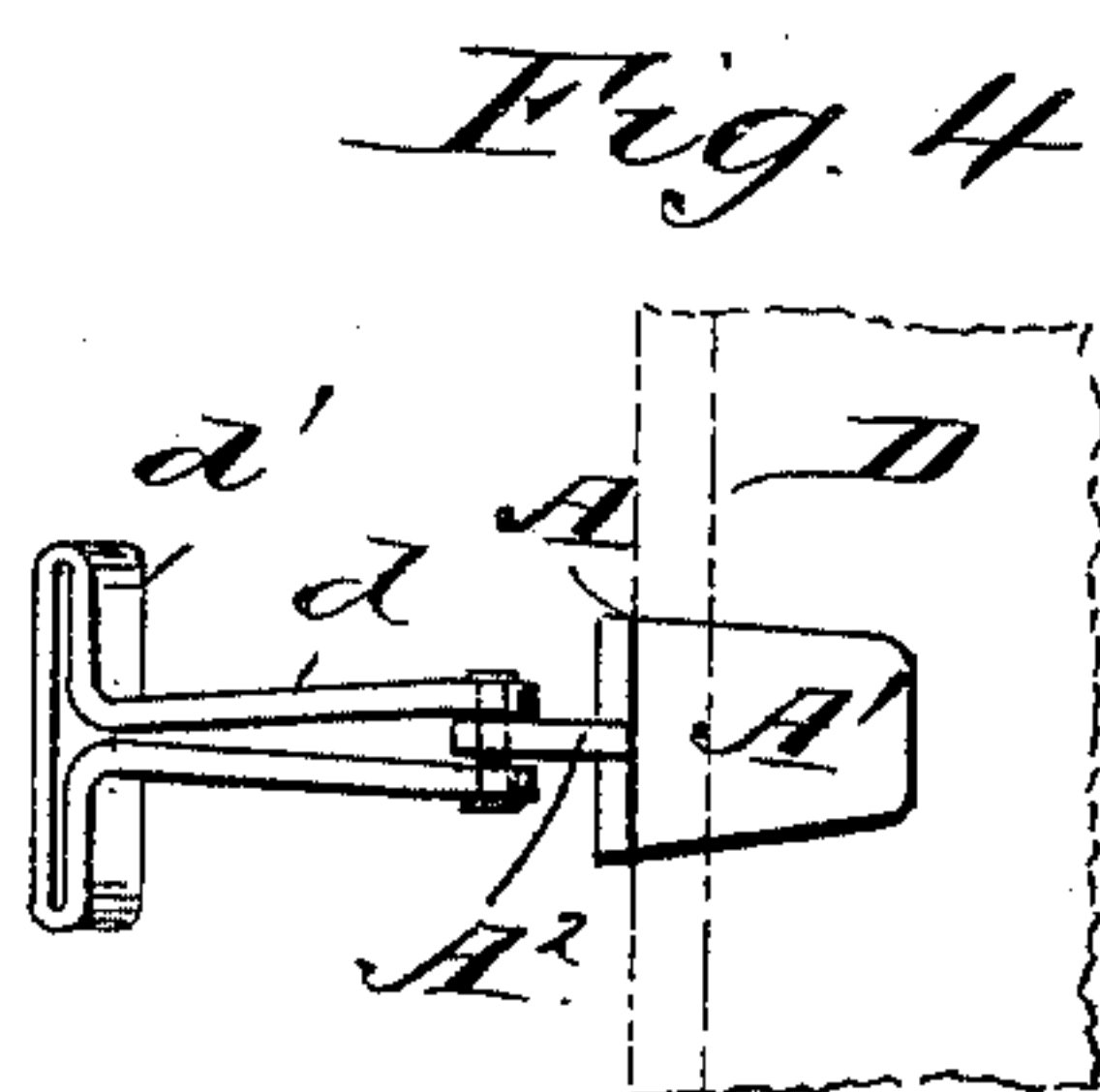
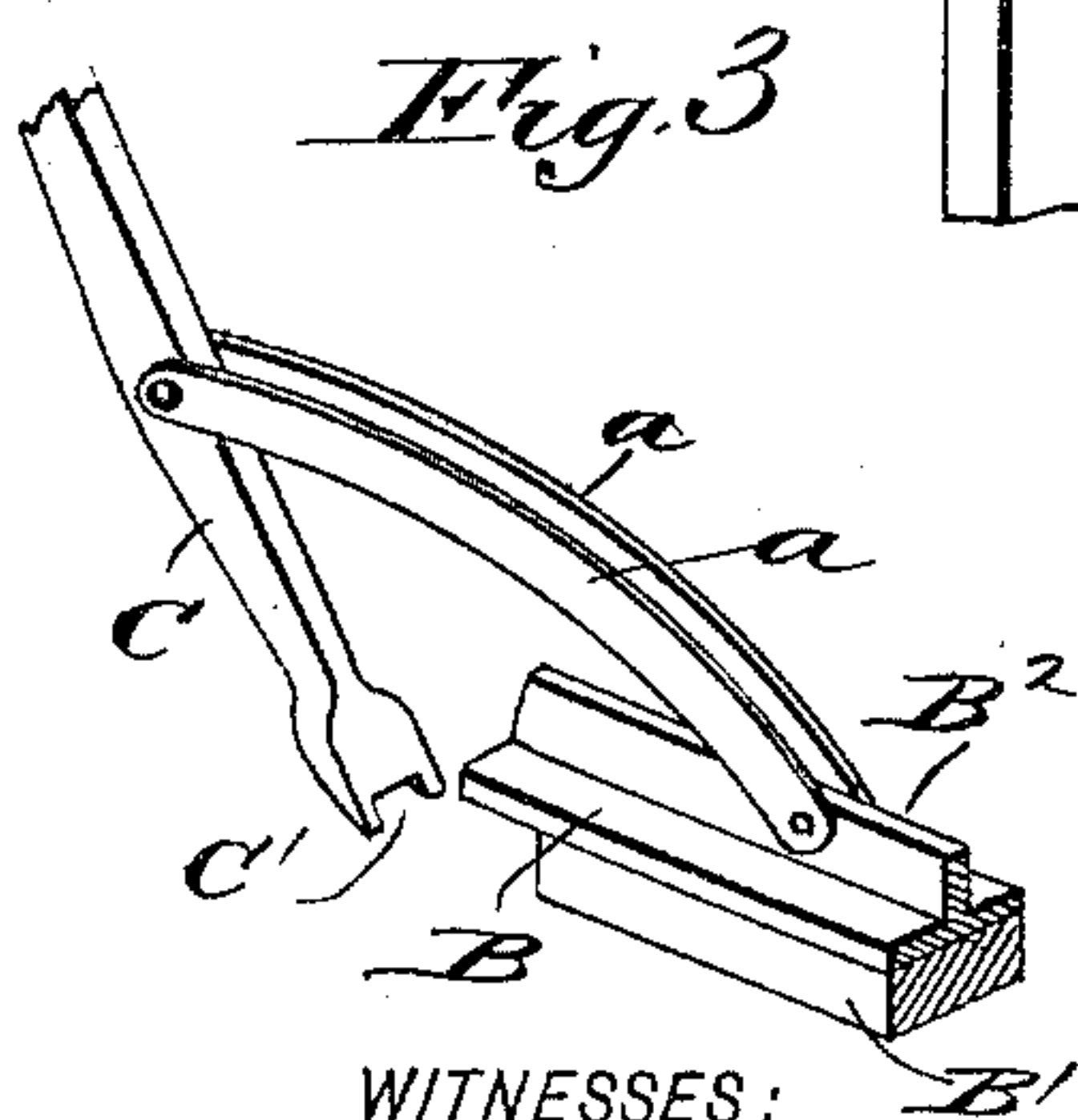
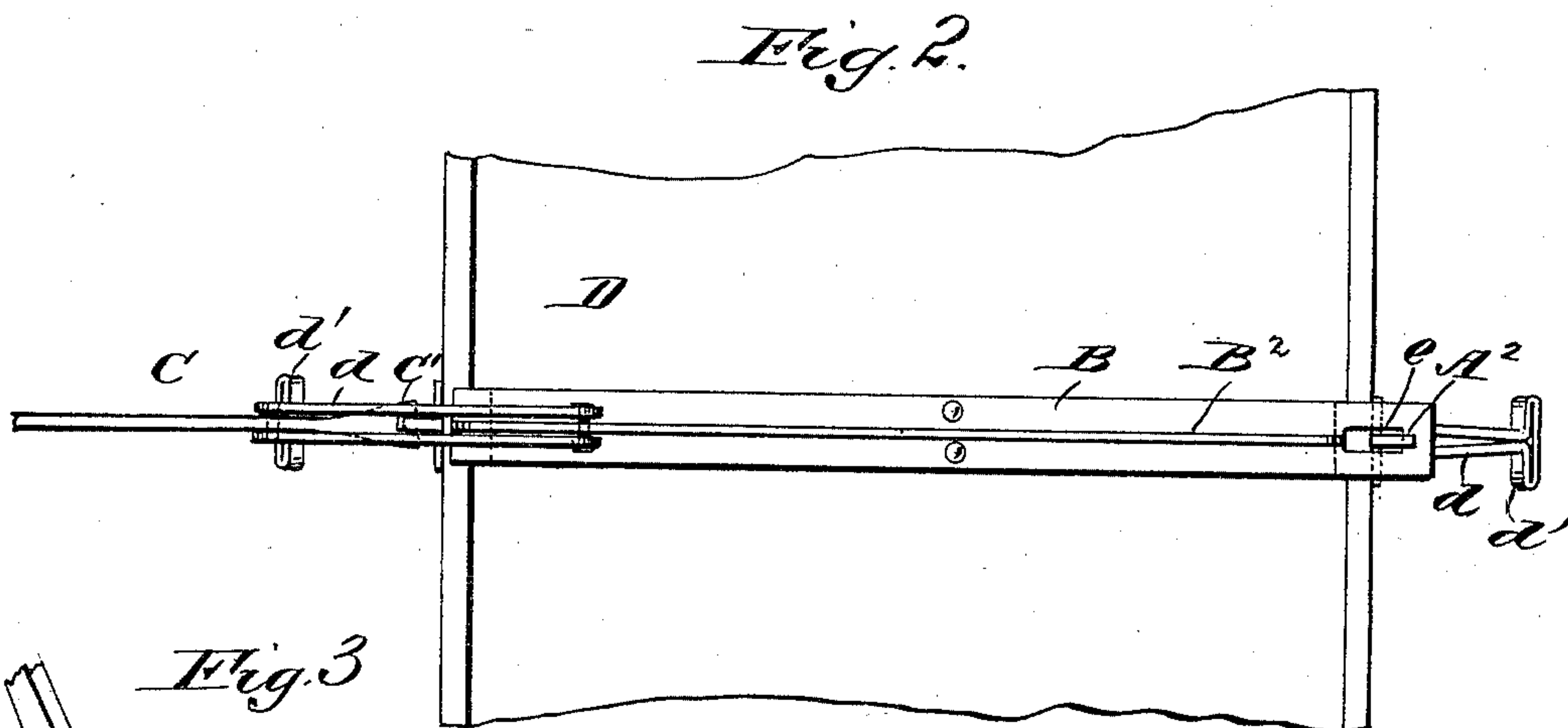
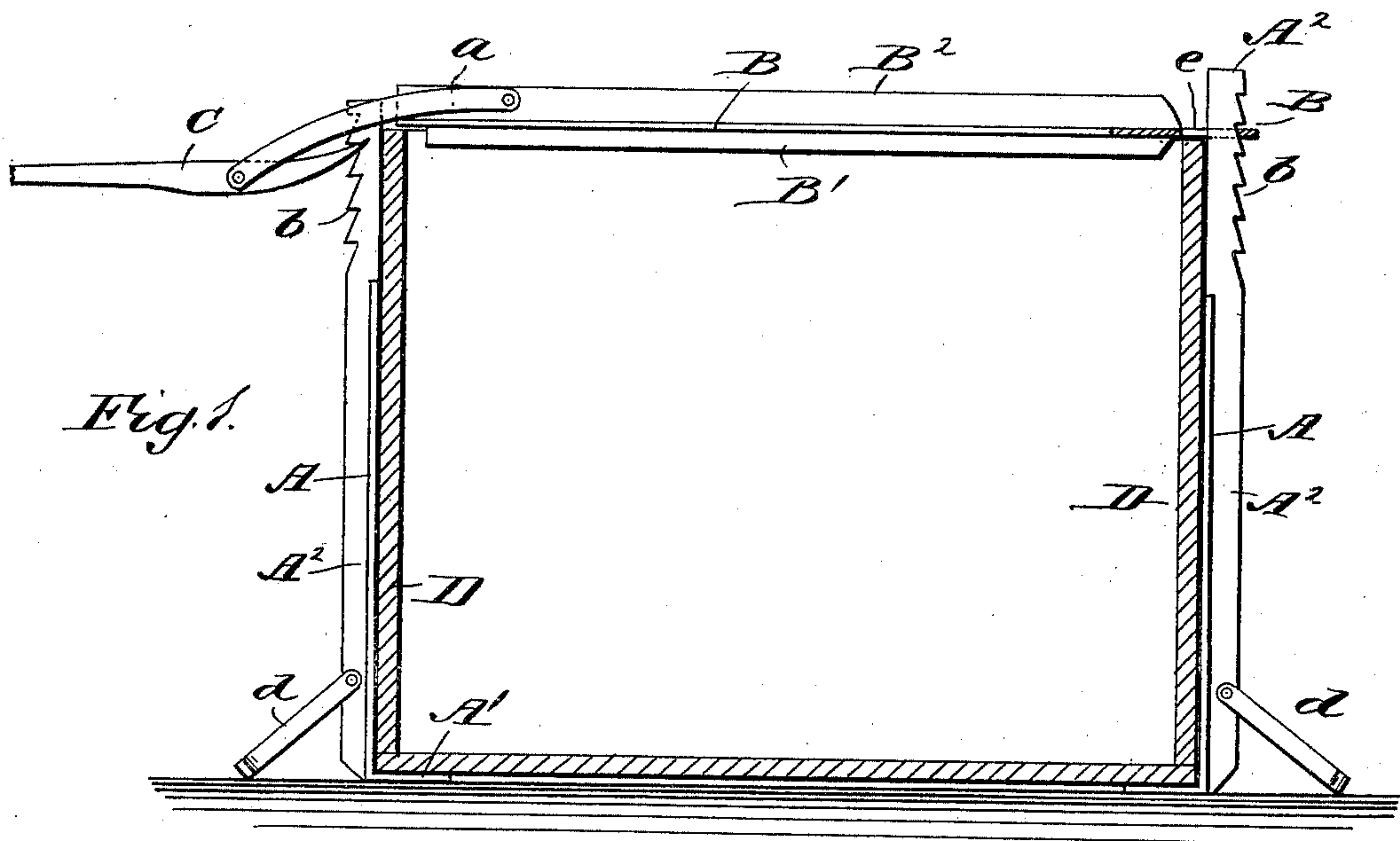


(No Model.)

R. H. BLAIR.
BOX CLAMP.

No. 432,855.

Patented July 22, 1890.



WITNESSES:
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UNITED STATES PATENT OFFICE.

ROBERT H. BLAIR, OF KANSAS CITY, MISSOURI.

BOX-CLAMP.

SPECIFICATION forming part of Letters Patent No. 432,855, dated July 22, 1890.

Application filed March 15, 1890. Serial No. 344,014. (No model.)

To all whom it may concern:

Be it known that I, ROBERT H. BLAIR, of Kansas City, in the county of Jackson and State of Missouri, have invented a new and useful Box-Clamp, of which the following is a full, clear, and exact description.

My invention relates to improvements in box-clamps, and is especially adapted for use on boxes containing nursery-stock, although it may be used for other classes of boxes. The boxes in which nursery-stock is packed are long enough to take in young trees, and consequently there is considerable spring to the sides of the box, so that when filled the sides will be pressed out by the stock within, especially when the box is well filled and the stock pressed into the same. In order that the box-cover may be suitably supported, it is necessary to nail cross-pieces into the top of the box, and when the sides are sprung outwardly this is extremely difficult to accomplish.

The object of my invention is to obviate this difficulty by providing means for easily pressing down the contents of a box, and for holding the sides in proper position while a cross-piece is being nailed into the box or a cover nailed upon the same.

To this end my invention consists in a box-clamp constructed substantially as herein-after described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a transverse section of a box with the clamp applied thereto; Fig. 2, a broken plan view of the same; Fig. 3, a detail perspective view of the cross-bar-operating lever and the connecting-arms; Fig. 4, a broken inverted plan of the box and attachment, showing one of the pivoted braces of the same; and Fig. 5, a detail view of one of the cross-bars.

The device consists of two similar side pieces or uprights A, a cross-bar B, which connects the two, and a lever C, pivotally connected with the cross-bar by the arms *a*. Each side piece A has a flat base, which rests against the side of a box, a bent portion A', which extends at a right angle with the base

A and is adapted to be placed beneath the bottom of a box, and a projecting rib A², which extends above the base A and has upon its outer edge near the top a series of notches *b*, to engage the end of the cross-bar B or lever C, as the case may be. Pivoted to each of the ribs A² near the bottom is a brace *d*, having a foot *d'*, which rests upon the floor or ground and holds the bottom of the side pieces in position against the box. The length of the cross-bar B should approximate to the normal width of the box upon which it is used. It has upon its under side a wooden bar B', which will not bruise the contents of the box, and upon its upper side a longitudinal rib B², to which the arms *a* are pivoted. The cross-bar B has also in the end opposite the arms *a* a slot *e*, through which projects the upper end of a rib A² of the side piece A when the clamping attachment is in position upon a box. The arms *a* are curved slightly, as shown, and are pivoted at one end to the rib B² of the cross-bar B, near one end of the cross-bar, and at the other to the lever C. The lever C has a long handle to give the necessary power, and a curved terminal end having a notch C' therein to engage the notches *b* of the ribs A².

The device is operated as follows: The side pieces A are placed against the opposite sides of the box D, with the part A' projecting beneath the box and with the braces *d* thrown out to hold the lower part of the side pieces in position. The slotted end of the cross-bar B is then placed over one of the ribs A², which project above the top edge of the box D, and the cross-bar will be engaged by the notches *b*. The notched end of the lever C is then placed in one of the notches *b* of the opposite rib A², and by depressing the lever C the sides of the box D will be pressed inwardly by the action of the lever C, arms *a*, and cross-bar B, and at the same time the contents of the box which project above its open upper end, especially the roots of trees, will be compressed below the top of the box as the cross-bar is moved downward, for it will be understood that before the lever C is swung down into the position shown in Fig. 1. that end of the bar B was elevated considerably above the edge of the box, so that the

bar was forced down at the same time that the standards were forced toward each other to press the sides of the box inwardly. As the arms *a* are curved, as shown, they will
5 allow the lever C to be depressed sufficiently for it to remain in locked position. The sides of the box being held as described, a cross-piece *g* may be easily nailed therein.

From the foregoing description it is obvious that the device may be used in attaching
10 covers to boxes where no cross-pieces are used by placing the cross-bar B on the top of the cover to be attached and applying the lever as described.

15 Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A box-clamp consisting, essentially, of two upright side pieces adapted to fit against
20 the sides of a box, said side pieces having an angular lower end to fit beneath the box and having notches near the top, a cross-bar having a slot in one end to fit upon the side pieces, and provided with a swinging lever
25 adapted to engage the notches of the side pieces, substantially as described.

2. A box-clamp consisting, essentially, of

two vertical side pieces having notched upper ends, as shown, braces pivoted to the lower portion of the side pieces to hold the same
30 in position, a cross-bar hooked upon one of the side pieces, and a lever mechanism connecting said cross-bar with the other side piece, whereby the side pieces may be drawn toward each other, substantially as described. 35

3. The combination, with the side pieces A, having the angular portions A' and notched ribs A², of the cross-bar B, having slot *e* therein, arms *a*, pivoted to the cross-bar, and the lever C, having notch C' therein, substan- 40 tially as described.

4. The combination, with the side pieces A, having ribs A² and adapted to fit the side of a box, the braces *d*, having feet *d'* and piv- 45 oted to the ribs A², of the bar adapted to connect at one end with the upper end of one standard and provided at its other end with a swinging lever to engage the opposite standard, substantially as described.

ROBERT H. BLAIR.

Witnesses:

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